PTO/SBIRBUD (08-03)
Approved to: use through 07/31/2006 Ourb 0551-0031
U.S. Paterd and Trademan Office, U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Resultion Act of 1995, no parable are required to a content of afformation where a contains a visuo QMB control number.

	ibstaule to: torm 144BA/B/PTO			Complete if Known			
Statistic its intil Lambert 1.0				Application Number	10/601,020		
INFORMATION DISCLOSURE		Filing Date	Јипе 20, 2003				
			PPLICANT	First Named Inventor	Andrea D. Branch, et al.		
				Art Unit	1648		
	(Use as man	y sheets as n	ec p88 <b>2/y</b> )	Examiner Name	Timothy M. Brown		
Sheet	1	of	2	Attainey Docket Number	RII-003CPUSDV1		

U.S. PATENT DOCUMENTS									
Examiner Initials"	Cda No '	Document Number Number-Kina Coas <sup>2</sup> ( # Mown)	Publication Date May-DD-YYYY	Name of Patentiee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appelli				

	FOREIGN PATENT DOCUMENTS								
Examiner Intellar	Cite No.1	Foreign Patient Document Country Costs*-number*-numb Costs* (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Caed Document	Pages, Columns, Lines, Where Resident Passages or Relocans Figures Appeter	T°			

"EXAMINER (IGUAL IT INTERFERCE CONSIDERED, WINDOWS PROPERTY OF FOR CONTINUED IN A CONTINUED WITH MPEP 809 DISSUITED CARBON IT AND A CONTINUED AND IN CONTINUED AND IN CONTINUED AND INCOME AND INCOME. THE PROPERTY AND INCOME AND INCOME AND INCOME. THE PROPERTY AND INCOME.

		NON PATENT LITERATURE DOCUMENTS	
xaminer nitals	Cite No '	include name of the author (in CAPITAL LETTERS), tate of the article (when appropriate), tate of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(e), volume-issue number(s), publisher, city and/or country where published.	73
AB	B1	Boulant, S., et al. "Unusual multiple recoding events leading to alternative forms of nepatitis C virus core protein from Genotype 1b." J Biol Chem. 2003 Nov 14: 278(46).45785-92	
AB	B2	Branch, A.D., et al. "The hepatitis C virus atternate reading frame (ARF) and its family of novel products: the atternate reading frame protein/F-protein, the double-frameshift protein, and others." Semin Liver Dis. 2005 Feb. 25(1) 105-17	
AB	B3	Choi, J. et al. Triple decoding of hepatris C virus RNA by programmed translational frameshifting." Mol Cell Biol. 2003 Mar; 23(5):1489-97.	
AB	B4	Komurian-Pradel, F., et al "Antigenic relevance of F protein in chronic hepatitis C virus infection." Hepatology. 2004 Oct, 40(4) 900-9	
AB	B5	Ogate, S., et al. "Comparative sequence analysis of the core protein and its frameshift product, the F protein, of hepatitis C virus subtype 1b strains obtained from patients with and without hepatocellular cardnoma." J Clin Microbiol. 2002 Oct, 40(10):3625-30.	
AB	B6	Rodriguez-Lopes, M. "Immunogenecity of variable regions of hepatrus C proteins." Journ. Of Gen. Virol. 1999, 80 727-73.	
AB	B7	Roussel, J., et al. "Characterization of the expression of the Hepatitis C virus F protein." J. Virol. 2003, 84 1751-1759	
AB	B8	Tan. S-L., et al. "Hepatitis C therapeutics current status and emerging strategies." Nature 2002 Nov; 1.867-881	
AB	B9	Vassilaki, N. et al. "Two alternative translation mechanisms are responsible for the expression of the HCV ARFT/F/Core +1 coding open reading frame." J Biol Chem. 2003 Oct, 278, 40503-40513.	

Examiner Signature	/Agnieszka Boesen/	Date Considered	09/07/2006
	<u> </u>		

PTO/SB/08a/b (08-03)
Approved for use through 07/31/2008 OMB 0851-0031
US Patent and Tragorham Office, US DEPARTMENT OF COMMERCE
Sports to a cascocon of information wides a consine a valid DMS control number

Substitute for form 1449A/B/PTO				Complete if Known		
50,24,2				Application Number	10/601,020	
INF	ORMATIC	ON DIS	CLOSURE	Fring Date	June 20, 2003	
STATEMENT BY APPLICANT				First Named Inventor	Andrea D. Branch, et al	
				Art Unit	1648	
	(Use as many	rsheets as n	ecessary)	Examiner Name	Timothy M. Brown	
Sheet	2	of	2	Attorney Docket Number	RII-003CPUSDV1	

		NON PATENT LITERATURE DOCUMENTS	
iudisis E×smiūsi	Cite No.1	include name of the author (in CAPITAL LETTERS), tide of the article (when appropriate), tide of the item (book, magazine, journal, senal, symposium, catalog, etc.), date, page(s), volume-assue number(s), publisher, ony and/or country where published	T2
AB	C1	Walewski, J.L., et al. "Reading between the lines evidence for a new Hepatitis C virus protein." Hepatology. 2003 Sep. 36(3) 757-60	
AB	C2	Walswski, J.L., et al. "Mutation Master profiles of substitutions in nepatible C virus RNA of the core, arremate reading frame, and NS2 coding regions." RNA, 2002 May, 8(5):557-71	
AB	Ç3	Walewski, J.L., et al. "Evidence for a new nepatitis C virus aritigen encoded in an overlapping reading frame." RNA. 2001 May, 7(5):710-21.	
AB	C4	Walewski, J.L., et al. "HCV patients have antibodies against a novel protein encoded in a second reading frame." Hepatology 28 (4, Pt. 2):278A, Abstr. 482 (October 1998).	
AB	C5	Xu, Z., et al. "Hepatitis C virus F protein is a short-lived protein associated with the endoplasmic reticulum." J Virol. 2003 Jan; 77(2):1578-83.	
·AB	C6	Yeh, C-T, et al. "Ammo acid substitutions in codons 9-11 of hepatais C virus core protein lead to the synthesis of a short core protein product." J Gastroenterol Hepatol. 2000 Feb; 15(2) 182-91	

<sup>&</sup>quot;EXAMINER Install or reterence considered, whether or not oppose is a conformance with MPEP 600. Draw this through castion if not in conformance and not considered. Include copy of this form with next communication to applicant.

Examiner	/amina-la Danna/	Pare	09/07/2006
Signature	/Agnieszka Boesen/	Considered	03/01/2000

<sup>&#</sup>x27;Approants unique cation designation number (quironal) "Approant is to place a check mark here if English tanguage Translation is attached

PE	
(°)	REWIN
( DE 02	l <b>S</b> is
PATENT & TR	A CHARLE

2	FA	CSIMILE	O۶	FORM	PTO-	1449

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE ATTY DOCKET NO
RII-003CPUSCN

June 20, 2003

Sheet 1 of 2 serial NO.

ST OF PUBLICATIONS CITED BY APPLICANT (Use several sheets if necessary)

Branch, Andrea D. et al.

GROUP 1648

10/601020

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	1	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AB	A1	5,350,671	09/94	Houghton et al	435	5	
AB	A2	5,443,965	08/95	Reyes et al	435	693	
AB	А3	5,728,520	03/98	Weiner et al	435	5	
AB	A4	5,840,839	11/98	Wang et al	530	325	
AB	A5	6,027,729	02/00	Houghton et al	424	228.1	
AB	A6	6,054,264	04/00	Chien et al	435	5	
AB	Α7	6,074,846	06/00	Ralston et al	435	69.3	
AB	A8	6,150,087	11/00	Chien	435	5	
AB	A9	6,171,782	01/01	Houghton et al	435	5	

FOREIGN PATENT DOCUMENTS

ſ			DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANS	LATION
L								YES	NO
Γ	AB	A10	WO 94/25601 A2,A3	11/94	wo				
ſ	AB	A11	WO 96/05315 A2,A3	02/96	WO				
Γ	AB	A12	WO 96/40227 A1	12/96	wo				

OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

		OTHERS (Including Author, Title, Date, Fertilient Fages, Ltc.)	
AB	A13	Bullock, T.N.J. et al "Ribosomal scanning past the primary initiation codon as a mechanism for expression of CTL epitopes encoded in alternative reading frames," <i>J. Exp. Med.</i> , 184:1319-29 (1996).	
AB	A14	Feucht, HH. et al. "Study on Reliability of Commercially Available Hepatitis C Virus Antibody Tests" Journal of Clinical Microbiology 33(3):620-624 (March 1995).	
AB A15 Ina, Y. et al. "Reduction of synonymous substitutions in the core protein gene of hepatitis C virus J. Mol. Evol., 38:50-56 (1994).			
AB	A16	Lo, SY. <i>et al.</i> "Comparative studies of the core gene products of two different hepatitis C virus isolates: two alternative forms determined by a single amino acid substitution." <i>Virology</i> 199(1):124-31(1994 Feb. 15).	
AB	A17 Lo S. V. et al. "Differential subcellular localization of henatitis C. virus core gene products."		
AB	A18		
AB	Malarkannan, S. et al. "Presentation of out-of-frame peptide/MHC class I complexes by a novel translation initiation mechanism." Immunity 10(6):681-90 (1999 Jun.).		
AB	A20 Pay R.P. et al. "Henotitis Civirus core protein cooperates with res and transforms primary rat		

Examiner	/Agnieszka Boesen/	Date Considered 09/07/2006
*EXAMINER:	ER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

/	OIPE	?
	DEC 0 5 201	
	PRETTA TRADEM	

FACSIMILE			

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTY DOCKET NO	
RII-003CPUSCN	
APPLICANT	•

June 20, 2003

Sheet 2 of 2 SERIAL NO. 10/601020

LIST OF PUBLICATIONS CITED BY APPLICANT (Use several sheets if necessary)

Branch, Andrea D. et al.

GROUP 1648

OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

AB	B1	Smith, D. B. et al. "Characteristics of nucleotide substitution in the hepatitis C virus genome: Constraints on sequence change in coding regions at both ends of the genome." J. Mol. Evol., 45:238-246 (1997)	
АВ	B2	Valenzuela, P. et al. "The nucleotide sequence of the hepatitus B viral genome and the identification of the major viral genes." in <u>Animal Virus Genetics</u> , Academic Press, pp. 57-70 (1980).	
AB	В3	Varaklioti, A. et al. "Alternate translation occurs with the core coding region of the Hepatitis C v genome." Journal of Biological Chemistry 277(20):17713-21 (2002).	riral
AB	B4	Walewski, J.L. et al. "A western blot assay for detection of patient antibodies to an HCV alternated reading frame protein." Abstract in Hepatology 30(4):41A poster 163 (1999).	
AB	B5	Walewski, J.L. et al. "HCV Patients Have Antibodies Against a Novel Protein Encoded in a Sec Reading Frame." <i>Hepatology</i> 28(4, Pt. 2):278A, Abstr. 462 (October 1998).	cond
AB	B6	Wang, J. et al. "Proteolytic conversion of hepatitis B virus e antigen precursor to end product occurs in a postendoplasmic reticulum compartment." J. Virol. 65:5080-83 (1991 Sep.).	
AB	B7	Xu, Z. et al. "Synthesis of a novel hepatitis C virus protein by ribosomal frameshift." EMBO J. 20(14):3840-48 (2001).	

	Examiner	/Agnieszka Boesen/	Date Considered 09/07/2006
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Dra if not in conformance and not considered. Include copy of this form with next communication			